

CLAIMS

1. A nozzle arrangement for an inkjet printhead, the nozzle arrangement including:
 - (a) a nozzle chamber for holding ink;
 - (b) a dynamic structure having: a lever arm; and an operative portion in fluid communication with the nozzle chamber, the dynamic structure being mounted for rotational movement about a pivot axis with respect to the nozzle chamber upon actuation;
 - (c) a fluid ejection port in fluid communication with the nozzle chamber for allowing ejection of ink upon movement of the dynamic structure relative to the nozzle chamber during actuation;
 - (d) an actuator extending between the lever arm and an anchor point, and having a predetermined length in a quiescent state prior to actuation;

the nozzle arrangement being configured such that, upon actuation, the length of the actuator changes such that the actuator applies a force between the lever arm and the anchor to cause rotational movement of the dynamic structure, which in turn causes ejection of the ink from the fluid ejection port.

2. A nozzle arrangement according to claim 1, wherein the fluid ejection port is formed in a roof portion that at least partially defines the nozzle chamber, the nozzle arrangement being configured such that, upon actuation, the operative portion of the dynamic structure is moved relative to the fluid ejection port, thereby causing ejection of the ink from the fluid ejection port.

3. A nozzle arrangement according to claim 1, in which:

the operative portion of the actuator defines a roof portion that at least partially defines the nozzle chamber; and

the fluid ejection port is formed in the roof portion;

wherein the nozzle arrangement is configured such that, upon actuation, the roof portion, and thereby the fluid ejection port, are moved relative to the nozzle chamber, thereby causing the ink to be ejected from the fluid ejection port.

4. A nozzle arrangement according to claim 1, configured such that, upon return of the actuator to a quiescent position after actuation and ejection of the ink through the fluid ejection port, the nozzle chamber is refilled with the ink via an inlet channel.
5. A nozzle arrangement according to claim 4, wherein the nozzle chamber is refilled with ink from the inlet channel due to a reduction in pressure within the nozzle chamber caused by surface tension of a concave ink meniscus across the fluid ejection port after ink ejection.
6. A nozzle arrangement according to claim 1, wherein the actuator is a thermal actuator.
7. A nozzle arrangement according to claim 6, wherein the actuator comprises at least one active beam that is resistively heatable by means of an electric current, thereby to generate the force by way of thermal expansion.
8. A nozzle arrangement according to claim 1, further including a lever arm support connected between a substrate and the lever arm.